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	Effective Date: 27-March-2006
<p style="text-align: center;">EXPOSURE CONTROL PLAN</p> <p>1 Purpose</p> <p>The Virginia Division of Forensic Science (DFS) has determined its employees have occupational exposure to bloodborne pathogens, microorganisms that can cause disease in humans. "Occupational exposure" is defined by the Occupational Safety & Health Administration (OSHA) as "reasonably anticipated skin, eye, mucous membrane, or parenteral (<i>piercing of skin or mucous membrane</i>) contact with blood or other potentially infectious materials (<i>BOPIM</i>) that may result from the performance of an employee's duties." The purpose of DFS' Bloodborne Pathogen Program (the Program), as defined in this written Exposure Control Plan (this Plan), is to ensure all such employee exposures are minimized or eliminated, in compliance with the OSHA Bloodborne Pathogens Standard (the OSHA Standard), 29 CFR 1910.1030.</p> <p>2 Review and Update</p> <p>2.1 The Program and this Plan will be reviewed at least annually and updated as necessary. They will also be evaluated any time exposure may or will result from the implementation of new procedures or changes to existing procedures. Reviews and updates will also address available changes in technologies and/or devices that eliminate or reduce exposure.</p> <p>2.2 Input on the Program and this Plan will be actively and regularly solicited from all employees, particularly on the effectiveness of engineering and work practice controls in minimizing or eliminating injuries from contaminated sharps.</p> <p>3 Scope and Application (Exposure Determination)</p> <p>3.1 The Program applies to all employees who have occupational exposure to bloodborne pathogens, disregarding the use of personal protective equipment (PPE). This includes all DFS employees.</p> <p>3.2 All time and expense associated with Program training, PPE, vaccinations, and post-exposure evaluations and follow-ups will be borne by DFS.</p> <p>4 Compliance Methods</p> <p>4.1 Standard Precautions</p> <p>"Standard Precautions" is the treatment of all human body fluids and substances as if known to be infectious for bloodborne pathogens. Standard Precautions shall be observed when working with BOPIM. In addition, all materials/items/surfaces contaminated with BOPIM shall be treated as potentially infectious and handled using Standard Precautions. For purposes of this Plan, BOPIM is defined as any human or animal body fluids, tissues and organs. Contaminated is defined as the presence or reasonably anticipated presence of BOPIM in a material or on an item or surface. Because of the nature of DFS' work, all evidence should generally be considered potentially contaminated/infected, and treated accordingly.</p> <p>4.2 Engineering and Work Practice Controls</p> <p>4.2.1 Engineering controls, e.g., exhaust hoods and biological safety cabinets, and work practice controls, e.g., prohibition of removal of contaminated scalpel blades by a two-handed technique, are the first line of defense at DFS. Engineering controls will be implemented whenever possible, maintained and inspected on a regular basis, and repaired as necessary.</p> <p>4.2.2 Exhaust Hoods and Biological Safety Cabinets</p> <p>Exhaust hoods or biological safety cabinets (hoods) will be located in all laboratory work areas. Employees shall work in a hood when they suspect materials/items being handled pose a potential for airborne transmission of pathogens.</p>	

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<div>4.2.3 Hygiene</div> <div>4.2.3.1 Handwashing facilities (warm running potable water, soap, and single use towels) will be located in or near all laboratory work areas. Hands shall be washed as soon as possible after removal of gloves or other PPE. Hands, or any other skin, shall be washed as soon as possible after contact with BOPIM. Eyes or mucous membranes shall be flushed with water as soon as possible after contact.</div> <div>4.2.3.2 Eating, drinking, smoking, application of cosmetics, and similar activities are prohibited in laboratory work areas. Employees should avoid touching their faces with gloved hands or items which have been touched with gloved hands.</div> <div>4.2.3.3 Food and drinks shall not be stored in laboratory work areas.</div> <div>4.2.4 Sharps</div> <div>4.2.4.1 “Sharps” are objects that can penetrate the skin. Contaminated sharps such as syringe needles or scalpel blades shall not be bent, capped, or removed unless there is no feasible alternative, and the action shall be performed using a mechanical device or one-handed technique. Contaminated needles generally shall not be sheared or broken.</div> <div>4.2.4.2 Contaminated reusable sharps, e.g., scissors, shall be decontaminated or placed in appropriate containers pending decontamination as soon as possible after use. Such containers shall be puncture resistant, labeled as noted in Section 6.1.1, and leakproof on the sides and bottom. The placement of the sharps in the containers shall allow subsequent removal of the sharps with no possibility of percutaneous (skin) injury.</div> <div>4.2.4.3. All contaminated broken glassware shall be handled by mechanical means, e.g., brush and dust pan, or tongs, and shall be disposed of as contaminated sharps (Section 4.4.7.3).</div> <div>4.2.5 Sample Handling</div> <div>4.2.5.1 All manipulations of BOPIM shall be performed in a manner which minimizes splashing, spraying and spattering of BOPIM, and generation of droplets of BOPIM.</div> <div>4.2.5.2 Mouth pipetting/suctioning of BOPIM is prohibited.</div> <div>4.2.6 Containerization of Samples</div> <div>Samples of BOPIM shall be received, handled, processed, stored, transported and shipped in containers which prevent leakage. Containers shall be closed, and labeled as noted in Section 6.1, prior to storage, transport and shipping. Note that easily recognizable samples which are always treated with Standard Precautions, e.g., Data Bank or Toxicology blood samples, are exempt from this labeling requirement during storage only. If the primary container is externally contaminated, it shall be placed in a secondary container which prevents leakage prior to storage, transport, or shipping. In addition, if a sample could puncture the primary container, the secondary container must be puncture resistant.</div> <div>4.2.7 Decontamination of Equipment</div> <div>Equipment which may be contaminated shall be examined and decontaminated, when feasible, prior to servicing or shipping. If equipment or portions of equipment cannot be decontaminated, a readily observable label meeting the requirements of Section 6.1.1 shall be affixed. That label, or another label placed nearby, shall also identify which portions of the equipment are contaminated. The label(s) and included information shall be brought to the attention of all employees and external agents responsible for servicing the equipment.</div>	

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<p>4.3 Personal Protective Equipment</p> <p>4.3.1 Appropriate PPE will be provided, cleaned, laundered, repaired, replaced, and disposed of at no cost to employees. Appropriate PPE is that which prevents BOPIM from contacting an employee or their clothing under normal conditions and times of use. PPE which becomes contaminated shall be removed, and replaced, as necessary, as soon as possible; contaminated reusable PPE shall be decontaminated before reuse. PPE includes such items as gloves, laboratory coats, safety glasses, goggles and face shields for laboratory use, and ventilation devices for first aid use.</p> <p>4.3.2 Employees shall use required PPE unless such use would endanger the employee or coworkers. Such occurrences shall be brief and singular; they shall be immediately investigated to determine appropriate changes in work practices and PPE to prevent recurrence.</p> <p>4.3.3 PPE will be readily accessible or issued directly to employees. As necessary, PPE will be provided in sizes appropriate for all employees. Alternatives to standard latex gloves will be provided to employees who are allergic to, or develop an allergy to, such gloves.</p> <p>4.3.4 PPE shall be removed prior to leaving the laboratory work area, and shall be placed in an appropriate area or container for storage, cleaning, decontamination, or disposal.</p> <p>4.3.5 Gloves</p> <p>4.3.5.1 Gloves shall be worn when there is a potential for hand contact with BOPIM or contaminated materials/items/surfaces.</p> <p>4.3.5.2 Gloves which are torn, punctured, or otherwise compromised shall be replaced immediately. Reusable gloves shall be decontaminated for reuse unless they are deteriorating or may be compromised.</p> <p>4.3.5.3 Disposable gloves shall not be reused after removal.</p> <p>4.3.6 Facial Protection</p> <p>Face shields shall be worn when exposure by splashing, spraying, spattering of BOPIM, or generation of droplets of BOPIM, may occur.</p> <p>4.3.7 Body/Clothing Protection</p> <p>Laboratory coats or similar protective apparel shall be worn when body exposure or clothing contamination may occur. In cases where gross exposure/contamination may occur, barrier clothing, caps, and shoe covers shall be used.</p> <p>4.4 Housekeeping</p> <p>4.4.1 Laboratory work areas shall be maintained in a clean and sanitary condition.</p> <p>4.4.2 Laboratory floors should be wet mopped weekly with detergent and water.</p> <p>4.4.3 Equipment, work surfaces, and other surfaces (floors, walls, ceilings), shall be cleaned and decontaminated after contact with BOPIM. Work surfaces shall be decontaminated after completion of procedures involving BOPIM, immediately after overt contamination, and at the end of the day if they may have been contaminated since last being decontaminated.</p> <p>4.4.4 Protective coverings, e.g., plastic backed absorbent paper, shall be removed, and replaced if necessary, if they become overtly contaminated, and at the end of the day if they may have been contaminated during the day.</p>	

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<p>4.4.5 All reusable bins, pails, cans, and similar receptacles which may become contaminated shall be inspected and decontaminated on a regular basis, and cleaned and decontaminated immediately upon overt contamination.</p> <p>4.4.6 Laundry</p> <p>4.4.6.1 Contaminated laundry (e.g., laboratory coats) shall be handled as little and as gently as possible. Such laundry shall be placed and transported in biohazard bags without rinsing or sorting. Heavily contaminated laundry shall not be sent out as laundry but shall be disposed of as regulated medical waste as specified in Section 4.4.7.4. Employees handling bagged contaminated laundry shall wear gloves.</p> <p>4.4.6.2 Commercial laundry facilities to which DFS sends contaminated laundry will be informed of the potentially infectious nature of the items.</p> <p>4.4.7 Regulated Waste Management</p> <p>4.4.7.1 Virginia's Department of Environmental Quality's definition of "Regulated Medical Waste" both differs from and supersedes the OSHA Standard's definition of "Regulated Waste." In practice, DFS' use of Standard Precautions for management of waste results in compliance under both definitions.</p> <p>4.4.7.2 All regulated medical waste will be disposed of in compliance with all applicable Federal, State and local regulations.</p> <p>4.4.7.3 Contaminated Sharps</p> <p>4.4.7.3.1 Contaminated sharps which are not to be reused shall be discarded immediately in containers which are closable, puncture resistant, leakproof on the sides and bottom, and labeled in accord with Section 6.1.1. Containers shall be easily accessible and in immediate proximity to the work area. They shall remain upright during use and be replaced both routinely and before being filled.</p> <p>4.4.7.3.2 Before removal from the work area, containers shall be closed in a manner which prevents spillage or protrusion of contents during storage, transport and shipping. If leakage may occur during subsequent handling, containers shall be placed in secondary containers which are closable, constructed to contain all contents and prevent leakage, and are labeled in accord with Section 6.1.1.</p> <p>4.4.7.3.3 Reusable containers shall not be opened, emptied, or cleaned manually, or in any other manner which would allow an employee to sustain a percutaneous injury.</p> <p>4.4.7.4 Other Contaminated Wastes</p> <p>4.4.7.4.1 Contaminated wastes other than sharps shall be discarded in containers which are closable, constructed to contain all contents and prevent leakage, and labeled in accord with Section 6.1.1. They shall be closed prior to removal in a manner which prevents spillage or protrusion of contents during storage, transport and shipping.</p> <p>4.4.7.4.2 If the outside of a container is contaminated, it shall be placed in a second container which is closable, constructed to contain all contents and prevent leakage, and is labeled in accord with Section 6.1.1. It shall be closed prior to removal in a manner which prevents spillage or protrusion of contents during storage, transport and shipping.</p>	

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<p>5 Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up</p> <p>5.1 Hepatitis B Vaccination</p> <p>5.1.1 The hepatitis B virus (HBV) vaccination series will be offered to all employees. Vaccinations will be offered immediately after an employee has completed the training described in Section 6.2, and no later than 10 working days after employment, unless they have previously completed the series, been determined to be immune by antibody testing, or have medical reasons which contraindicate vaccination. Such occurrences will be documented and the documentation maintained in the employee's medical records. Vaccinations will be available at no cost to employees, at a reasonable time and place, performed by or under the supervision of a licensed health care professional, and otherwise according to the most recent U.S. Public Health Service recommendations. If the Service recommends a booster dose or doses after this Plan is implemented, such will be made available under the same terms as the original series.</p> <p>5.1.2 Employees will not be required to be prescreened for HBV antigens or antibodies as a prerequisite for receiving the vaccination.</p> <p>5.1.3 If an employee declines to receive the vaccination, they shall sign a copy of the declination form on the last page of this Plan. If such an employee decides at a later date to receive the vaccination, they may receive the vaccination under the same terms as originally offered.</p> <p>5.2 Post-exposure Evaluation and Follow-up</p> <p>5.2.1 A confidential medical evaluation and follow-up by a health care professional will be offered immediately to any employee who reports an exposure incident. For purposes of this Plan, an exposure incident is defined as contact of BOPIM or any contaminated material/item/surface with an employee's body. Evaluations and follow-ups will be available at no cost to employees, at a reasonable time and place, performed by or under the supervision of a licensed health care professional, and otherwise according to the most recent U.S. Public Health Service recommendations. The employee and their supervisor shall fill out an accident report form as soon as possible to document the circumstances of the incident, including the exposure route(s). Information from the accident report and other available sources will be evaluated and addressed to minimize/eliminate the possibility of the occurrence of a similar event.</p> <p>5.2.2 The identity of the source individual and their HBV and human immunodeficiency virus (HIV) infectivity status will be determined and documented, when possible. This information will be provided to the exposed employee. If the infectivity status is not available from medical records, consent from the source individual will be requested for collection and testing of their blood to determine that status. If consent is not obtained, DFS will document that information, and will seek to obtain legal authority to compel the collection and testing.</p> <p>5.2.3 The employee's blood will be collected and tested for HIV and HBV status as soon as feasible after their consent is obtained. If the employee consents to collection, but not HIV testing, the blood will be preserved for 90 days; if during this time the employee provides consent, testing will be done as soon as feasible. Laboratory tests will be conducted by an "accredited" laboratory. Note that OSHA's use of the term "accredited" is taken to mean <i>certified to perform testing on human specimens under the Clinical Laboratory Improvement Amendments of 1988</i>.</p> <p>5.2.4 The employee will be offered post-exposure prophylaxis as part of the follow-up, when medically indicated, as recommended by the U.S. Public Health Service. The follow-up will also include an offer of:</p> <ul style="list-style-type: none"> • counseling concerning precautions to take because of the incident, • information on symptoms of illnesses which may result from the incident, • evaluation of illnesses which may result from the incident, and • treatment of illnesses which do result from the incident. 	

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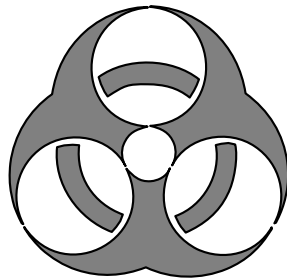
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5.3 Information for/from Healthcare Professional

- 5.3.1 The healthcare professional responsible for vaccination, evaluation or follow-up will be provided a copy of the OSHA Standard, as necessary. Professionals responsible for evaluation or follow-up will also be provided with a description of the employee's related duties, the circumstances of the incident, including the exposure route(s), known infectivity information about the source individual, and all pertinent medical records for the employee, including vaccination status, which are DFS' responsibility to maintain.
- 5.3.2 For an employee offered vaccination, the healthcare professional will provide DFS a written opinion of the employee's suitability for the vaccination, and a statement as to whether or not the employee has been vaccinated.
- 5.3.3 For an employee undergoing evaluation or follow-up, the professional will provide DFS with a written opinion limited to statements the employee has been informed of the results of the evaluation or follow-up, and has been told about conditions arising from exposure to BOPIM which require further evaluation or treatment.
- 5.3.4 All other information is confidential.
- 5.3.5 Written opinions will be obtained, and provided to the employee, within 15 days of the employee's first visit to the professional.

6 Hazard Communication**6.1 Labels**

- 6.1.1 Labels shall include the word "Biohazard" and the symbol:



Label backgrounds shall be completely or predominantly fluorescent orange or orange-red. Lettering and symbols shall be in a contrasting color. Labels shall be closely affixed to the container in a manner that prevents their loss or unintentional removal. Red bags or containers may be substituted for labels.

- 6.1.2 Labels shall be affixed to containers of regulated waste, refrigerators and freezers containing BOPIM, and other containers used to store, transport or ship BOPIM, except individual containers need not be labeled if contained in a larger labeled container during storage, transport and shipping.
- 6.1.2.1 Specifically, a label must be present on the following types of containers. A label must be placed on each of these containers when received by DFS personnel, unless the submitter has already done so. Labels must not cover any writing or other markings on a container.
- 6.1.2.1.1 All mailing boxes or other containers enclosing blood samples for DUI/DUID analyses, unless they are placed in a larger labeled container as soon as possible after receipt.
- 6.1.2.1.2 All victim Physical Evidence Recovery Kits.

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<div style="margin-left: 100px;"> <p>6.1.2.1.3 All containers submitted by the Office of the Chief Medical Examiner.</p> <p>6.1.2.1.4 All containers (tubes) of blood submitted to the DNA Data Bank</p> <p>6.1.2.1.5 Any other container enclosing a liquid blood/body fluid/tissue sample.</p> <p>6.1.2.2 In addition, a “Biohazard” label must be placed on all “secondary” containers of liquid blood/ body fluid/tissue before transfer between laboratories on the lockbox. Examples of secondary containers include coolers for DNA Data Bank blood samples, heat sealed plastic bags for Toxicology samples, and the outer packaging of blood samples submitted for lead analysis by the Regional Firearms Sections.</p> </div> <p>6.2 Training</p> <div style="margin-left: 40px;"> <p>6.2.1 All employees will be provided associated training during working hours. Training will be provided before beginning work with BOPIM or contaminated materials/items, and annually thereafter. Additional training will be provided any time new procedures or changes to existing procedures are implemented which may or will result in exposure. Material will be appropriate in content and vocabulary to educational level of employees.</p> <p>6.2.2 Training will be provided by persons knowledgeable in the subject matter as it applies to DFS. Training will include an opportunity for an interactive question and answer session. Training will address:</p> <ul style="list-style-type: none"> • the OSHA Standard and its contents, • the Program and this Plan, • DFS’ assumption of all time and expense associated with the Program, • the epidemiology and symptoms of bloodborne diseases, • the modes of transmission of bloodborne pathogens, • appropriate methods for recognizing work processes that may result in exposure, • the use and limitations of how engineering controls, work practices, and PPE reduce or prevent exposure, • the types, use, location, removal, handling, decontamination and disposal of PPE, • the basis for selection of PPE, • the efficacy, safety, side effects, method of administration, and benefits of the HBV vaccine, • the appropriate actions to take in a BOPIM emergency, • the procedure to follow if an exposure incident occurs, including evaluation and follow-up, and • labels. </div>	
<p>7 Recordkeeping</p> <p>7.1 Medical Records</p> <div style="margin-left: 40px;"> <p>7.1.1 A complete and accurate record for each employee will be kept. Each record will include:</p> <ul style="list-style-type: none"> • name and social security number, and • a copy of the employee’s HBV vaccination record, including the dates of all vaccinations, and medical records pertaining to the employee’s suitability to receive the vaccination. <p>7.1.2 The record for any employee who sustains an exposure incident will also include:</p> <ul style="list-style-type: none"> • a copy of the accident report pertaining to the incident, • a copy of the information provided to the health care professional performing evaluation and follow-up, • a copy of all results of examinations, medical testing, and follow-up procedures after the incident, and • a copy of the healthcare professional’s written opinion resulting from post-exposure evaluation and follow up. </div>	

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<div data-bbox="248 291 1528 1098"> <p>7.1.3 All medical records will be kept confidential, and will not be disclosed or reported without the employee's express written consent. Medical records will be provided upon request for examination and copying to an employee and anyone having their written consent. Records will be maintained by DFS for the period of employment plus 30 years.</p> <p>7.2 Training Records</p> <p>7.2.1 Training records will include:</p> <ul style="list-style-type: none"> • training dates, • content or summary of training, • names and qualifications of trainers, and • names of all trainees. <p>7.2.2 Training records will be provided upon request for examination and copying to an employee or their representative. Training records will be maintained by the DFS Safety Coordinator (Laboratory Safety Officers at Regional Laboratories) for a minimum of three years from the training dates.</p> <p>7.3 Sharps Injury Log</p> <p>A log of percutaneous injuries from contaminated sharps will be maintained. The log will be maintained in a manner which protects the confidentiality of the injured employees. The log will record:</p> <ul style="list-style-type: none"> • the type, and brand, if applicable, of sharp, • the laboratory Section and/or area where the injury occurred, and • an explanation of how the injury occurred. </div>	

◆End

HEPATITIS B VACCINE DECLINATION FORM

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Printed Name: _____

Signature: _____

Date: _____